

TECHNOLOGICAL EMPOWERMENT

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Known as Application Laboratory (AppLab), the suite uses Google SMS Search technology and the MTN network. It includes Google SMS Tips, which allows users to have an experience similar to a web search; **Farmer's Friend**, a searchable database with both agricultural advice and targeted weather forecasts; **Health Tips**, which provides sexual and reproductive health information, paired with **Clinic Finder**, which helps locate nearby health clinics and services; and **Google Trader**, which matches buyers and sellers of agricultural produce and commodities as well as other products.

Grameen Foundation, a global nonprofit organization that helps the world's poorest people access financial services and technological solutions, developed the suite of services in 2007. It is the most comprehensive suite of cell applications to be offered in Africa, and Grameen intends to launch similar services in other African countries.

The services are designed to work with basic mobile phones to reach the broadest possible audience. A user enters a text query and Google returns relevant answers after searching a database. Users can access the services quickly and privately at any time to search relevant content on-demand in the same way that a user accesses the internet. Google says the scheme could help about nine million Ugandans who have mobile phones but do not have internet access.

AppLab Uganda, located in Kampala and directed by the Grameen Foundation's Technological Center, focuses on creating opportunities for poor people to share and access essential information through innovative uses of mobile telephony.

Empowering Communities

"Our core mission is to enable the poor to create a world without poverty. Technology has always played a key role in achieving this mission for us," Mr. Peter Blandin, Executive Director of the Grameen Foundation, told the *Guardian* newspaper. "We believe that access to the information and services that many of us take for granted will help alleviate poverty and empower poor and underserved communities."

According to the International Telecommunications Union, Uganda has the fastest growth rate in mobile phone subscriptions in Africa with 9.5 million subscribers - 30% of the population - surpassing the 27% average coverage in the rest of Africa. The number of people who have access to a cell phone is much higher, however, because handsets are often shared by family members and village phone operators who sell time on their cell phones to members of the community.

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PHOTO: GRAMEEN FOUNDATION

A farmer in Uganda uses the AppLab Farmer's Friend application to seek advice regarding a disease afflicting his pineapple crop. After typing in the words "pineapple disease," he receives the answer: "Copper deficiency in pineapples leads to fruit rot. Cut affected fruit and dispose of where they will not contaminate other fruits, or burn."

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The information in the applications was developed in collaboration with key local partners. The Busoga Rural Open Source Development Initiative (BROSDI) provides locally relevant agricultural information created and tested by smallholder farmers and designed to meet their needs. AppLab worked with Marie Stopes Uganda, the local affiliate of the international sexual and reproductive health NGO, and Straight Talk Foundation, a Ugandan nonprofit that specializes in health communication, to develop the health component.

Using the Google Trader application, local buyers and sellers are able to broaden their trading networks and reduce their transaction costs. AppLab worked with the International Institute for Tropical Agriculture, TechnoServe and SNV Netherlands Development Organization to develop the concept with banana farmers and traders in southwestern Uganda.

"These sustainable and scalable models put critical information and knowledge directly into the hands of poor people who have access to mobile devices, in an effort to further alleviate poverty," said Mr. Joseph Mucheru, the head of Google's East Africa office. "This work is significant both for individuals and for the broader regional economy."

ICT INFRASTRUCTURE

AFRICA'S SEACOM SUBMARINE CABLE GOES LIVE

The SEACOM submarine cable, connecting Eastern and Southern Africa to global networks in Asia and Europe, went live in July, opening up opportunities for governments, businesses and individuals to use the network as a platform to drive economic growth and compete globally.

The fiber optic cable was simultaneously launched on July 23 in five countries - Kenya, Mozambique, South Africa, Tanzania and Uganda. It will lower the cost of telecommunications in Africa and connect the region to the global information highway via broadband internet access. Among the other benefits will be the ability to provide business process outsourcing (BPO) services, real time event streaming, high resolution and internet television, data and video services and e-learning and e-commerce services, all with the potential to help develop Uganda's service sector.

Information and Communication Technology Minister, Mr. Aggrey Awori described the arrival of the cable as the advent of a new age. "This will be one of the great leveling tools of our time," he said.

The 17,000-km-long cable took two years to lay at a cost of about \$650 million. At its commissioning, Tanzanian President Jakaya Kikwete spoke via a live feed from Dar-es-Salaam to journalists in Kampala, Maputo, Johannesburg, London and Marseille in the south of France. "The arrival of this cable signals the beginning of a new era in the telecommunications sector," said President Kikwete. "History has been made."

The benefits of the cable - super fast internet connections and vastly expanded bandwidth capacity - are expected to be immense, particularly in East Africa which until now has had to rely solely on expensive satellite communication. SEACOM has announced it would offer wholesale prices for use of the cable to telecommunications companies in the range of \$100 per megabyte. "What we are providing is a highway and it will be up to the telecom companies and internet service providers to decide the final cost," said Mr. Haskell Ward, SEACOM's Senior Vice President for Government Relations. "No project can compete with this for the importance it holds for Africa."

The extraordinary benefits of the cable were immediately felt at the AGOA Forum, held in Nairobi in August, when for the first time the proceedings could be streamed live to all five of the connected countries.

In anticipation of the arrival of the cable, the Government of Uganda over the past several years has been building a national fiber optic data transmission backbone to which local telecommunications companies MTN Uganda and Uganda Telecom have connected via their own land-based cables. The Ugandan government plans to subsidize bandwidth costs for BPO companies and help them market their services at home and abroad.



The SEACOM cable connects Eastern and Southern Africa to Asia and Europe

SAVING LIVES

LAKE VICTORIA FISHERMEN GET CELL PHONE RESCUE SERVICE

The 200,000 fishermen who earn their living on Lake Victoria can now use cell phones to call for help free-of-charge should they run into trouble on the 69,000 km² body of water, the world's second largest inland lake. Up to 5,000 people die each year on Lake Victoria as a result of piracy, drowning and other accidents.

The new service, launched in July, is the result of a collaboration between mobile operator Zain, global communications technology provider Ericsson and the GSMA Development Fund, the charitable arm of the trade association serving the mobile phone industry. Zain and Ericsson upgraded the existing infrastructure and built an additional 21 radio sites - three of them solar-powered - to provide cell phone coverage up to 20 kilometers into the lake. This ensures coverage to over 90% of fishing zones.

When fishermen in distress call the free emergency number, Ericsson's Mobile Position System, which determines the geographical location of mobile subscribers, will enable emergency services to locate the mobile signal of the caller and relay the information to a Rescue Coordination Center run by Uganda's National Lake Rescue Initiative (NLRI), which operates rescue boats. The service also has the capacity to alert the crews of nearby boats to the location of the boat in distress.

The initiative was the result of a 2005 feasibility study conducted by the East African Community (EAC) to evaluate and recommend technologies for a maritime communications system for Lake Victoria, which constitutes the world's largest freshwater fishery, producing 700,000 to 800,000 metric tons of fish annually worth about \$400 million. As well as providing increased safety and security, the extended cell phone coverage is also expected to provide an economic boost to the commercial fishing sector and to the tourism and transportation industries.

EXPORT EARNINGS

REGIONAL TRADE BOOSTS UGANDA'S SURPLUS

Uganda recorded a trade surplus in May for the second month running, thanks largely to a surge in the export of manufactured goods and informal cross border trade, the Bank of Uganda announced in July.

Exports earned \$344.3 million, while the country imported \$297.1 million in goods, the Bank reported.



Informal cross border trade has boosted Uganda's export earnings

"The economy continued to show its robustness and resilience to external shocks by registering a trade surplus in May 2009, driven largely by robust performance in the informal cross border trade," the Bank's report stated.

Informal trade increased 66% to \$239.9 million in May compared to the same period last year. Total

exports grew 19% in May from \$316.9 million in May 2008, while the import bill decreased by 16% over the same period in 2008 due largely to lower international prices.

The trade figures reflected a growth in demand from southern Sudan, Rwanda, Burundi and eastern Democratic Republic of Congo (DRC) for Uganda's food, particularly rice and beans, and manufactured products.

REGIONAL INTEGRATION

EAC STATES TO LAUNCH COMMON MARKET

The five member states of the East African Community (EAC) have agreed to formally launch a common market on January 1, 2010, allowing the free movement of goods, services, capital and people across the region.

Under the agreement, to be signed in November, the five EAC nations - Burundi, Kenya, Rwanda, Tanzania and Uganda - expect the common market to enable partner states to enjoy economies of scale with a view to supporting the process of regional economic development. The member states are also negotiating to have one visa to allow investors and visitors to move easily between EAC countries.

The new agreement extends the already existing Customs Union, which allows only raw materials to cross borders duty-free.

The trade bloc covers more than 121 million people with a combined gross domestic product (GDP) of \$57 billion. EAC officials hope a common market will make their region easier to market overseas as an investment, trade and travel destination. The share of Uganda's exports going to its neighbors has grown steadily since the launch of the original customs

union in 2005. In 2008, \$209.6 million, 55% of the country's export earnings came from exports to Kenya and Tanzania. As Uganda contains more arable land than its neighbors, it in particular stands to benefit from reduced barriers to food exports. The next step towards full regional political and economic integration will be the establishment of a monetary union followed, eventually, by political federation.

FIGHTING COUNTERFEITERS

IMPORTS TO BE INSPECTED AT COUNTRY OF ORIGIN

In a move to combat the importation of counterfeit goods, the Uganda National Bureau of Standards (UNBS) will begin hiring special agents in November to inspect high-risk goods destined to be exported to Uganda before they leave their country of origin.

UNBS Executive Director Mr. Terry Kahuma described the Pre-export Verification of Conformity Program (PVoC) as a measure to improve the quality of the goods coming into Uganda and to protect consumers from substandard and counterfeit imports such as pharmaceutical drugs.

Other products to be covered include electrical products and appliances, food products, building and construction materials, domestic and household goods, tires, tubes, spare parts, chemicals and toys. The PVoC will also help ensure that Ugandan manufacturers will not be subjected to unfair competition from cheaper counterfeit or substandard products.

Ugandan officials believe the program will streamline the importation process by reducing or eliminating delays in clearing imports caused by sampling and testing while the goods are in customs. They also hope it will relieve importers of laboratory costs and will reduce demurrage (compensation for import delays) and difficulties and costs associated with the disposal or re-exportation of rejected goods. An additional benefit will be the elimination of the unethical disposal of toxic substances such as radioactive waste.

UNBS will work in collaboration with national standards agencies in the countries of origin. Goods that pass inspection will be issued with a certificate of conformity to UNBS standards, which must be presented when the goods enter a Ugandan port of entry.



Ugandan police display seized counterfeit goods



FOOD SECURITY

UGANDA TO BE PART OF DROUGHT-TOLERANT MAIZE TRIAL

As part of the ongoing effort to increase food security in Africa, Kasese region in southwestern Uganda has been selected as one of five areas to conduct field trials for new drought-tolerant varieties of maize, the most widely grown food staple in Africa.

With more than 300 million people dependent on maize as a food source and with drought expected to increase in Africa as a result of climate change, scientists are focusing on developing varieties that will reliably survive dry weather conditions. The trials will combine conventional breeding, marker-assisted breeding and biotechnology, and will be subject to assessment by national authorities according to the regulatory requirements of the partner countries. Trials will also be conducted in Kenya, Mozambique, South Africa and Tanzania.

The five-year Water Efficient Maize for Africa (WEMA) project is being conducted by an innovative public-private partnership that brings together the African Agricultural Technology Foundation (AATF); the Maize and Wheat Improvement Center (CIMMYT), an international seed development organization; the global agricultural company Monsanto; and agricultural research institutions in eastern and southern Africa. The WEMA partnership was formed in response to a growing call by African farmers, governments and scientists for the need to address the effects of drought in a way that is cost effective to African smallholder farmers.

CIMMYT will provide high-yielding maize varieties that are adapted to African conditions and expertise through conventional breeding and testing for drought tolerance. Monsanto will provide proprietary germplasm, advanced breeding tools and expertise, and drought-tolerance transgenes developed in collaboration with the chemical company BASF. The project will also involve local agricultural and research institutions, both public and private, thus expanding their capacity and experience in crop breeding, biotechnology and biosafety.

It has been estimated that 25% of losses due to drought can be eliminated by genetic improvement in drought tolerance, and a further 25% by application of water conservation practices. According to Dr. Godfrey Asea, the WEMA country coordinator, the new varieties are expected to increase yields by 20% to 35% over current varieties in drought conditions.

Seeds from the varieties developed through the project will be distributed royalty-free to African seed companies.



Maize is food staple in Uganda

ENVIRONMENTAL STEWARDSHIP

UGANDAN TOURISM COMPANY GOES CARBON NEUTRAL

Classic Africa Safaris has become the first Ugandan company to go carbon neutral by buying carbon credits from farmers in the Bushenyi region who are growing indigenous trees under the Trees for Global Benefit (TGB) project managed by the Environmental Conservation Trust of Uganda (Ecotrust).

"As a business based in Uganda, we are contributing to the country's carbon footprint and climate change," Mr. Mel Gormley, the Managing Director of Classic Africa Safaris told *New Vision* newspaper. "We decided to go carbon neutral because it is the right thing to do."

The Uganda Carbon Bureau assessed how much carbon the company produces to determine the number of credits it should buy to offset its emissions. Classic Africa Safaris is also following guidance from the bureau to further cut its energy use by maintaining company vehicles and employing other energy-saving measures.



Farmer in Bushenyi inspects tree seedlings

The TGB program is a cooperative carbon offset program aimed at restoring important and degraded forest habitats. The trees belong to the individual farmer who has a management objective for growing them - usually timber, medicine or fruit - and receives subsidies through carbon certificates. One hundred and thirty six farmers are currently enrolled in the Bushenyi region. They earn additional income through the establishment of tree nurseries and the sale of seedlings.

TGB was established in Uganda in 2003 as a way to bring opportunities to farmers and smallholders to use their land in a sustainable but profitable manner. Farmer income and technical training offered through the project allows the farmer to protect the land and pursue sustainable agriculture options rather than clearing the land for intensive farming. The project also encourages biodiversity preservation and helps protect the extensive equatorial riverine forest in the Kyambura Wildlife Reserve.

Uganda is one of Africa's leaders in the fast-developing carbon credit market. The Uganda Carbon Bureau provides practical advice and support to project developers, carbon credit buyers, development agencies and others wanting to better understand climate change, global warming and the carbon emissions trading markets. The bureau is also providing advice and support to the newly created Ugandan Parliamentary Forum on Climate Change.

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